

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEENDERT A. GERRITSEN
and
SECK L. LEE

Appeal No. 2000-0697
Application No. 09/049,938

HEARD: June 12, 2002

Before KIMLIN, KRATZ and POTEATE, Administrative Patent Judges.
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-6, all the claims in the present application. Claim 1 is illustrative:

1. A process for reducing the sulphur content of a hydrocarbon feedstock to a value of less than 500 ppm, comprising contacting a feedstock with a 95% boiling point of 450°C or less and a sulphur content of 0.1 wt.% or more in the presence of hydrogen under conditions of elevated temperature and pressure with a first catalyst comprising a Group VI hydrogenation metal component and a Group VIII hydrogenation metal component on an

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oxidic carrier, after which at least part of the effluent from the first catalyst is contacted with a second catalyst comprising a Group VI hydrogenation metal component and a Group VIII hydrogenation metal component on an oxidic carrier which comprises 3 to 15 wt.% of silica, calculated on the weight of the catalyst, to achieve the reduction in the sulphur of the hydrocarbon feedstock to less than 500 ppm.

The examiner relies upon the following reference as evidence of obviousness:

Riley	4,048,060	Sep. 13, 1977
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Appellants' claimed invention is directed to a process for reducing the sulphur content of a hydrocarbon feedstock having a 95% boiling point of 450°C or less and a sulphur content of at least 0.1 wt.%. The process is conducted in the presence of first and second hydrogenation catalysts wherein the second catalyst comprises an oxidic carrier of 3-15 wt.% silica. The product of the process has a sulphur content of less than 500 ppm.

Appealed claims 1-6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Riley.

Upon careful consideration of the opposing arguments presented on appeal, we find that the examiner has not established a prima facie case of obviousness for the claimed process. Accordingly, we will not sustain the examiner's rejection.

As urged by appellants, Riley does not teach or suggest the catalytic hydrogenation of the particular feedstock claimed, i.e., one having a 95% boiling point of 450°C or less, and the reference does not teach or suggest that the second catalyst comprises a support having 3-15 wt.% silica. Unlike the claimed feedstock, Riley is directed to a heavy hydrocarbon feed boiling above 650°F which contains substantial quantities of material (at least 10%) boiling above 1000°F (see column 3, lines 50-57 and column 4, lines 5-8). Also, while Riley teaches that the support for the second catalyst "may further contain minor amounts of silica" (column 6, lines 35-36), there is no suggestion that the support contain the claimed 3-15 wt.% silica. In addition, Riley does not teach obtaining a product having less than 500 ppm sulphur. The reference discloses maintaining approximately 3000 ppm sulphur in the product.

The examiner maintains that:

The argument Riley does not disclose that 95% of the feedstock boils of [sic, at] 450°C or less is not persuasive because the examiner maintains that one having ordinary skill in the art would have modified the Riley process by utilizing a feed having a boiling point in a range as claimed because it would be expected that the results would be similar or the same because the two processes are similar [page 6 of Answer, first paragraph].

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The examiner has not established, however, the specific similarity between the Riley and claimed process to support the conclusion that one of ordinary skill in the art would have reasonably expected that the Riley process is adaptable and suitable for feedstocks other than those disclosed by Riley. For example, the examiner has not cited any reference which demonstrates that processes similar to that disclosed in Riley have been used to treat feedstocks of the type claimed.

Regarding the claimed amount of silica in the carrier of the second catalyst, "it is the examiner's position that the minor amount of silica [disclosed by Riley] can be interpreted as 1, 2, 3, or 4 wt.%" (page 5 of Answer, first paragraph). Again, however, the examiner has not presented the requisite factual basis for this conclusion. For instance, the examiner has not demonstrated that it was known in the art to employ catalytic carriers comprising the claimed amount of silica in processes similar to the one claimed. The examiner places the cart before the horse in stating that "the applicant does not show that a catalyst that contains 3 wt.% of silica is better than a catalyst that contains about 1 or 2 wt.% of silica" (id.). It is the examiner's burden, in the first instance, to establish a prima facie case of obviousness for the claimed amount of silica in the

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second catalyst. This must be done by prior art evidence or compelling scientific reasoning, not conclusory remarks.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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PETER F. KRATZ)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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LINDA R. POTEATE)	
Administrative Patent Judge)	

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